The Electron Transport Chain

Within the flesh and bones of all eukaryotic organisms, there lays the ravaged nation called the Electron Transport Chain. This is where NADH and FADH2 are now enslaved to the horrible complex brothers and their mother ATP Synthase. The NADH and FADH2 work their whole lives capturing e- however, they are monitored by the ubiquinone twins and the cytochrome, younger sister of the complex brothers, and must give up all e- they capture or face death. The e- are very important to the dictatorship as it makes the precious substance called water.

First, complex I force all the NADH into a line and when their turn comes, the NADH must give up a single e- which changes them to NAD+. At this state, they become savage and easy to control beasts and excellent at detecting more e-. At the same time, complex I funnel the rabid H+ and command them to walk on the main street called the Intermembrance Space.

The e- is then shipped to one of the ubiquinone twins who receive another e- from complex II, a brother who forces all the FADH2 to give up the e- captured and changes them into FAD+, another savage and easy to control e- detector. The ubiquinones must also receive a H+ per electron to add to the parade of rabid protons.

Once the first ubiquinone twin has 2 e-, she will send both to the second ubiquinone twin who will hand them over to the toughest interrogators in the country; complex III and cytochrome. They are very scrupulous inspector and will check for spies who want to overthrow the ATP dictatorship. Lastly, complex III will send the 2 e- to complex IV who will surgically force them with 2 H+ and half of O2 to create the covenant water while releasing more protons to the growing proton march.

Finally, the parade of protons reaches the mouth of the ATP Synthase and, one by one, are swallowed down. With each proton ingested, ATP Synthase smashes together one ADP and a kidnapped P to create the rare ATP, the fuel that runs the nation. After the ATP is made, the ATP Synthase spits out the proton back to the backlands called the Mitochondrial Matrix, an area solely inhabited by the rabid protons and this process starts anew.